

Research Fellow (Experimental Nanophotonics and Free Electron science) Nanyang Technological University

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Job Title Research Fellow (Experimental Nanophotonics and

Free Electron science)

Department School of Electrical and Electronic Engineering

Institution Nanyang Technological University

Singapore, , Singapore

Date Posted May 7, 2025

Application Deadline Open untill filled

Position Start Date Available Immediately

Job Categories Research Scientist/Associate

Academic Field(s) Electrical and/or Electronics

Engineering - Other

Job Website https://ntu.wd3.myworkdayjobs.com/Careers/job/NTU-

Main-Campus-Singapore/Research-Fellow--Experimental-Nanophotonics-and-Free-Electron-

science- R00020646

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<u>Main-Campus-Singapore/Research-Fellow--</u> Experimental-Nanophotonics-and-Free-Electron-

science- R00020646

Apply By Email

Job Description

School of Electrical and Electronic Engineering is one of the founding Schools of the Nanyang Technological University. Built on a culture of excellence, the School is renowned for its high academic



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standards and research. With over 3,000 undergraduates students and 2,000 graduate students it is one of the largest EEE schools in the world and ranks 4th in the field of Electrical & Electronic Engineering in the 2025 QS World University Rankings by Subjects.

Today, the School has become one of the world's largest engineering schools that nurtures competent engineers and researchers. Each year, the School graduates over a thousand students who are ready to take on great ambitions and challenges.

For more details, please view: https://www.ntu.edu.sg/eee.

We are seeking a Research Fellow (RF) who is highly skilled in and deeply passionate about experiments that combine nanophotonics with free electron science. The RF should have strong background in photonics as well as in the use of electron sources, such as DC and RF electron guns, as well as the design and handling of vacuum chambers. Prior exposure to free-electron-based instrumentation, such as scanning electron microscopes, transmission electron microscopes is also relevant. The role of the RF will focus on the design and implementation of experiments that combine free electron sources with nanophotonics concepts, towards the realization of compact, efficient extreme ultraviolet (EUV) sources for applications including EUV spectroscopy and nanolithography.

Key Responsibilities:

- Design and implementation of experiments involving free electron-driven generation of extreme ultraviolet (EUV) radiation.
- Characterize the EUV properties of nanostructures and using these nanostructures in experiments to demonstrate enhanced EUV emission.
- Lead papers and publish in high-impact journals.
- Present at top-tier international conferences.
- Assist PI in writing grants and supervision of graduate and undergraduate students.



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Provide logistical support pertaining to laboratory operation for the project.

Job Requirements:

- PhD degree in physics, mathematics, engineering or related field
- Strong background in in photonics as well as in the use of electron sources, such as DC and RF electron guns, as well as the design and handling of vacuum chambers.
- Prior exposure to free-electron-based instrumentation, such as scanning electron microscopes, transmission electron microscopes is also relevant.
- Working knowledge of electromagnetic simulations
- Good written and oral communication skills
- Competent in teamwork and presenting results in informative visuals
- Interpersonal skill: Ability to work under pressure, Ability to work independently, develop solutions under strict timelines, meticulous and eye for details, excellent organizational / time management skills
- Entry level candidates are welcome to apply

We regret to inform that only shortlisted candidates will be notified.

Contact Information

Please reference Academickeys in your cover letter when



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applying for or inquiring about this job announcement.

Contact

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